

SUMMARY
BIOLOGICAL OPINION FOR THE 12.47 KILOVOLT DIXIE-ESCALANTE TRANSMISSION
LINE NEAR SCENIC, ARIZONA

Date of Opinion: January 26, 1996

Action Agency: Bureau of Land Management, Shivwits Resource Area, St. George, Utah

Project: Proposed construction and maintenance of approximately 5,295 feet of 12.47 kV transmission line and upgrading of approximately 2,640 feet of a 7.2 kV transmission line to 12.47 kV near Scenic in Mohave County, Arizona.

Listed Species Affected: Mojave population of the desert tortoise (*Gopherus agassizii*), a federally listed threatened species.

Biological Opinion: Non-jeopardy

Incidental Take Statement:

Level of take anticipated: Anticipated take includes no more than one desert tortoise injured or killed as a result of project construction or maintenance and four desert tortoises through harassment associated with excavation of occupied burrows and movement of desert tortoises out of harm's way.

Reasonable and Prudent Measures: The biological opinion presents three measures for reducing incidental take. Implementation of these measures through the terms and conditions are mandatory.

Terms and Conditions: Eighteen mandatory terms and conditions are included to implement the reasonable and prudent measures. They include a variety of measures to reduce incidental take of desert tortoises, such as minimization of taking individual animals (but moving animals out of harm's way when necessary), education of project personnel, reducing the potential for predation on desert tortoises, monitoring and preconstruction surveys, and monitoring of take and habitat loss.

Conservation Recommendations: The Arizona Strip District should promptly complete an amendment of their Resource Management Plan to implement the Desert Tortoise Recovery Plan. The Bureau should also consider developing a log of all Bureau-authorized projects that have affected desert tortoise habitat. This log would allow quick assessment of total habitat loss, numbers of tortoises taken, and other statistics useful in preparing environmental baselines in endangered species documentation.



United States Department of the Interior

Fish and Wildlife Service

Arizona Ecological Services Field Office

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In Reply Refer To:

AESO/SE

2-21-96-F-119

January 26, 1996

TO: Area Manager, Shivwits Resource Area, Bureau of Land Management,
St. George, Utah

FROM: Field Supervisor

SUBJECT: Biological Opinion for Construction and Maintenance of the 12.47 kilovolt Dixie-Escalante Transmission Line

This biological opinion responds to your request for initiation of formal consultation with the Fish and Wildlife Service pursuant to section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1531-1544), as amended (Act). Your request was dated December 13, 1995, and received by us on January 8, 1996. At issue are impacts that may result from construction and maintenance of a 12.47 kilovolt transmission line by the Dixie-Escalante Rural Electric Association (REA) near Scenic in Mohave County, Arizona. These impacts may affect the Mojave population of the desert tortoise (*Gopherus agassizii*), a federally listed threatened species, and critical habitat designated for the species.

This biological opinion was prepared using information from the following sources: your December 13, 1995, request for initiation of consultation and accompanying documentation, including a section 7 evaluation for right-of-way A-29319 (Bureau 1995a) and an environmental assessment for the project (EA No. AZ-010-96-03)(Bureau 1995b); informal consultation between our staffs; and our files. Literature cited in this biological opinion is not a complete bibliography of all literature available on the desert tortoise, nor is it a complete review of the effects of utility construction and maintenance on the species. A complete administrative record of this consultation is on file in this office.

In this biological opinion the Service finds that the effects of proposed construction and maintenance of the 12.47 kV transmission line is not likely to jeopardize the continued existence of the desert tortoise nor are they likely to destroy or adversely modify critical habitat designated for this species. Eighteen terms and conditions are described to reduce take associated with the proposed action.

BIOLOGICAL OPINION

DESCRIPTION OF PROPOSED ACTION

Growth in the area of Scenic, Arizona, located near the Nevada State line just south of the Virgin River, has created a need to upgrade power transmission service to this community. Scenic is currently served by a 7.2kV line that is overloaded. The existing line, which is rated for 25 amps, is currently carrying 90 amps. Additional facilities are needed to bring power into the area.

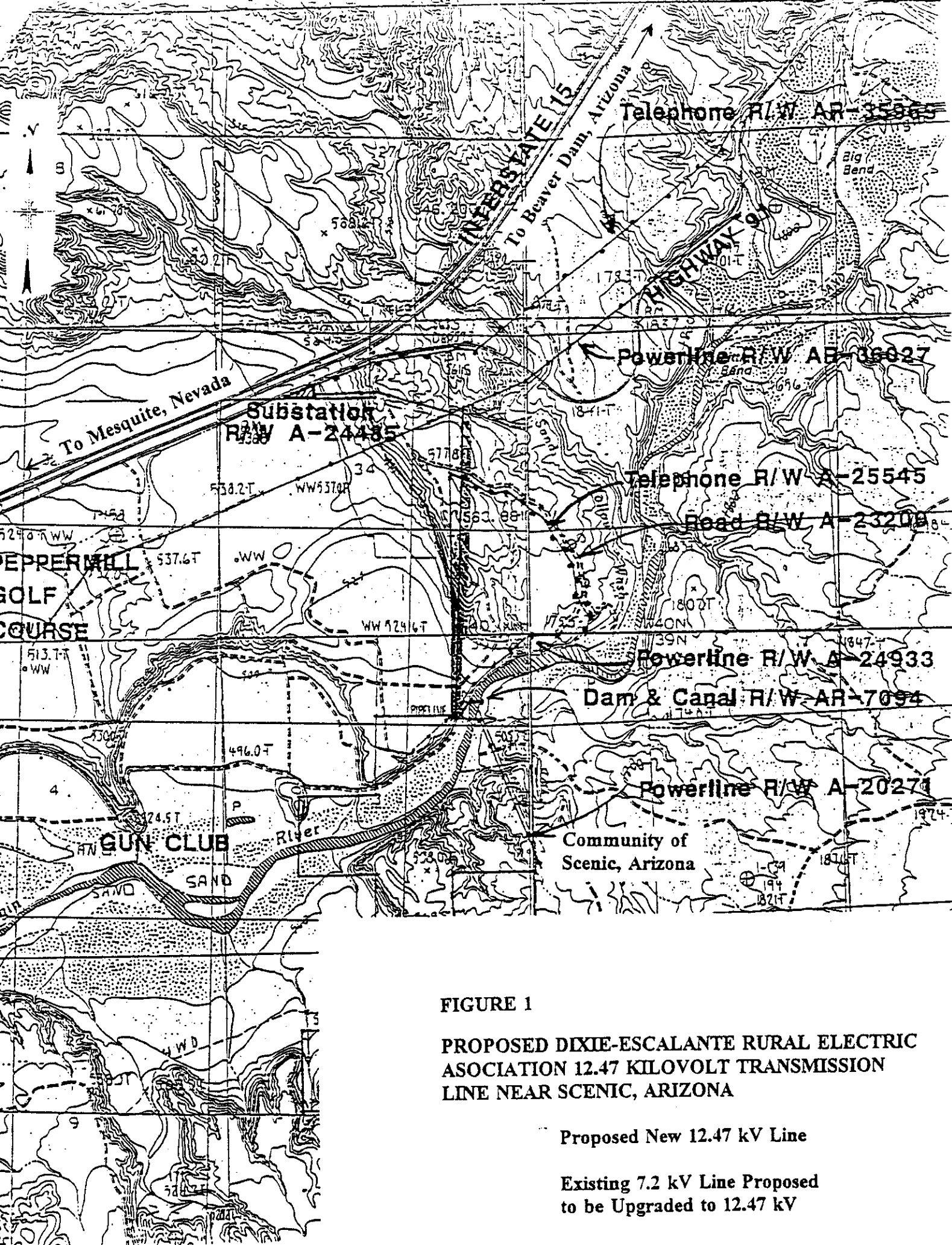
To meet this need, Dixie-Escalante REA proposes construction of a new 12.47 kV transmission line, approximately 5,295 feet in length, to connect and bring power from an existing powerline that parallels Interstate 15 (in right-of-way AR-36027) to another existing powerline (in right-of-way A-20271) that crosses the Virgin River and delivers power to Scenic. Approximately 2,640 feet of the latter existing powerline would also be retrofitted to accommodate the 12.47 kV load (Figure 1). Performance of this work is contingent upon granting of a right-of-way by the Bureau of Land Management.

All construction activities would be limited to a 40-foot wide right-of-way, and would include placement of 15 wooden poles with 8-foot long wooden crossarms strung with 4 wires on the new right-of-way north of the Virgin River, and retrofitting the existing line south of the Virgin River with new crossarms and two additional wires. No construction would be necessary in the Virgin River or on the lines that span the Virgin River, as this portion of the line was pre-wired to carry the additional load. Construction access would occur via existing roads within the right-of-way, except that short cross-country travel of approximately 10 to 20 feet off the road would be necessary to place each new pole, to retrofit existing poles, and to pull new lines. No travel between poles would be necessary to pull lines. No new permanent access would be required. Several temporary construction staging areas would be needed within the right-of-way. The transmission line is to be constructed in accordance with specifications to reduce or eliminate hazards to raptors that may perch on the poles or lines. Construction is scheduled for early spring of 1996, and would begin as soon as authorization is granted from the Bureau. Periodic inspection and maintenance of the lines would consist of driving the access roads and correcting problems as they occur.

Proposed Mitigation Measures

The Bureau (1995a and b) proposes the following measures to reduce the possibility of take of desert tortoises and destruction of tortoise habitat during proposed construction and maintenance activities.

1. If a desert tortoise wanders onto the project site, all activity will cease until the tortoise wanders out of harm's way of its own volition or a qualified biologist can move it safely.



2. All work areas authorized for activity associated with the construction of the transmission line shall be staked or marked on the ground prior to construction. An alternative to staking the work areas would be to have a biologist on site during construction to monitor the project and insure no impacts to the tortoise or other-listed species would occur. Temporary work areas would be made within the confines of the right-of-way.

3. Construction-related traffic shall be restricted to routes approved by the authorized officer. Acreage of all temporary roads and work areas used for placing the power poles or stringing the wire shall be estimated and a compensation figure of \$100 per acre shall be paid to the Bureau prior to issuance of the right-of-way.

4. If project activities occur between March 15 and October 15, a desert tortoise biologist will be on site during any activity to ensure that tortoises are not inadvertently harmed. All sheltersites will be flagged and avoided. Any sheltersites that will be destroyed will be excavated by a qualified biologist to ensure that no tortoises are trapped or crushed. The applicant has proposed construction of the line prior to March 15 while tortoises are still inactive.

5. A desert tortoise biologist would be responsible for informing all employees working on this project about tortoises (including information provided by the Service and the Bureau on the life history of the tortoise, its status, protocols for dealing with tortoises if and when they are encountered, and the definition of take).

6. Desert tortoises encountered during pre-work clearances or during project activities will be relocated by the qualified biologist a minimum of 150 yards into an off-site burrow on public lands. If a burrow is not available, one must be constructed by the biologist.

7. At no time shall vehicle or equipment fluids be dumped on public lands. All accidental spills must be reported to the Bureau and be cleaned up immediately using the best available practices. All spills of federally or State-listed hazardous materials that exceed reportable quantities shall be promptly reported to the appropriate State agency and the Arizona Strip District of the Bureau.

8. No surface disturbance shall be authorized that would impact any threatened or endangered species prior to compliance with the Act.

9. Specific sites as identified by the authorized officer, such as areas with listed species or fragile watersheds, where construction equipment and vehicles shall not be allowed, shall be clearly marked on site before any construction or surface disturbing activities begin. The Bureau and Dixie-Escalante REA shall be responsible for assuring that construction personnel are well trained to recognize these markers and understand the equipment movement restrictions involved.

10. Construction sites shall be maintained in a sanitary condition at all times; waste materials at those sites shall be placed in covered receptacles to avoid attracting predators of desert tortoises and disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment.

11. No new permanent access routes would be constructed. Temporary access to each new pole site would be rehabilitated by raking out vehicle tracks upon completion of the project.

STATUS OF THE SPECIES

On August 4, 1989, the Service published an emergency rule listing the Mojave population of the desert tortoise as endangered. In a final rule dated April 2, 1990, the Service determined the Mojave population of the desert tortoise to be threatened. The desert tortoise is a large, herbivorous reptile found in portions of the California, Arizona, Nevada, and Utah deserts, and in Sonora and northern Sinaloa, Mexico. The threatened Mojave population is found in California, Nevada, and north of the Colorado River in Arizona and southwestern Utah. In Arizona, desert tortoises of the Mojave population are most active during the spring and early summer when annual plants are most common. Additional activity occurs during warmer fall months and after infrequent summer monsoons. Desert tortoises spend the remainder of the year in burrows, escaping the extreme weather conditions of the desert.

The desert tortoise is threatened by numerous factors, most of which are human-caused. These factors include destruction, degradation, and fragmentation of desert tortoise habitat resulting from habitat conversion to urban or agricultural development, construction of roads, mining, sheep and cattle grazing, and other activities; direct mortality or removal of animals from populations due to collecting, road kills, etc.; and mortality due to an upper respiratory tract disease (URTD), particularly in the western Mojave Desert (Service 1994). Fire is an increasingly important threat to desert tortoise habitat. Over 500,000 acres of desert lands burned in the Mojave Desert in the 1980s. Fires in Mojave Desert scrub degrade or eliminate habitat for desert tortoises (Appendix D of Service 1994).

The recovery plan for the Mojave population of the desert tortoise (Service 1994) proposes the establishment of 14 Desert Wildlife Management Areas (DWMAs) in six recovery units. Land management in DWMAs would target the reduction or elimination of those factors that have caused declines in desert tortoise populations. The boundaries of proposed DWMAs are not precisely defined in the recovery plan, but would be established by the Bureau and other land management agencies in coordination with the Service, State wildlife agencies, and others. The proposed Dixie-Escalante 12.47 kV transmission line is located in an area not likely to be included in a DWMA. However, it is immediately south of an area that could be included in the Beaver Dam Slope DWMA and just north of lands likely to be included in the Virgin Slope portion of the Gold-Butte Pakeon DWMA, both of which are in the northeastern Mojave recovery unit.

The Service designated critical habitat for the Mojave population of the desert tortoise in a Federal Register notice dated February 8, 1994 (59 FR 5820-5846, also see corrections at 59 FR 9032-9036). The proposed project area is not located in critical habitat; however, critical habitat occurs approximately 2 miles to the west.

Further information on the range, biology, and ecology of the desert tortoise can be found in Luckenbach (1982), Turner et al. (1984), Weinstein et al. (1987), various papers by J.R. Spotila and others in Herpetological Monographs published June 30, 1994, various papers in Bury and Germano (eds.)(1994), and Service (1994).

ENVIRONMENTAL BASELINE

General Vegetation Communities and Habitat Condition:

The proposed action would occur near the Virgin River within a vegetation community referred to as the creosote series of Mohave desert scrub (Turner 1982). The major plant species are creosote, *Larrea tridentata*; white bursage, *Ambrosia dumosa*; range ratany, *Krameria parviflora*; and galleta grass, *Hilaria rigida*. Areas of agriculture and rural/urban development also occur in the vicinity of the project area, as well as riparian and aquatic habitats in the channel of the Virgin River.

The project site is in an area that is being developed for agricultural, rural, and urban uses. This area has been disturbed by off-highway vehicle activity, roads, fire, illegal dumping, and other human-related activities (Bureau 1995a and b). Growth and development is occurring on private lands at Scenic and in nearby Mesquite, Nevada. Recent projects near Scenic that have been authorized by the Bureau and have been the subject of formal consultations on the desert tortoise include construction of 7.6 miles of powerline from near Scenic to near Beaver Dam, Arizona; construction of 10.5 miles of fiber optic cable from Mesquite, Nevada to Beaver Dam; and livestock grazing on the Beaver Dam Slope and Virgin Slope. In addition, the Bureau is currently in formal consultation with the Service on proposed fire suppression activities that could occur anywhere in desert tortoise habitat on public lands in the Arizona Strip District.

Status of the Desert Tortoise in the Project Area:

A 100 percent desert tortoise survey of the proposed right-of-way for the new transmission line and an area extending 300 feet to either side of it was conducted on December 15, 1995, by the Bureau (1995a). No desert tortoises or desert tortoise sign were found; however, several cavities were discovered that, although unoccupied, could serve as temporary cover sites for tortoises (Bureau 1995a). The existing powerline that runs from the Virgin River south to Scenic in right-of-way A-20271, on which new lines will be strung, was not surveyed.

The general region in which the project site lies was surveyed with the use of triangular, 1.5 mile by 10-yard, line transects, primarily in 1981 and 1982 (Appendix 2 of Bureau 1991). These data provide distributional information and rough estimates of relative tortoise density.

Although the sections in which the project would occur were not surveyed, surveys of adjoining sections all yielded tortoises and/or tortoise sign (Table 1).

Table 1: Results of triangular line transects in the project area¹

Section Surveyed	Year Surveyed	Total Corrected Sign	Number of Tortoises
T40N R16W, S35	1982	7	0
T40N R16W, S35	1988	5	0
T40N R16W, S25	1982	8	1
T39N R16W, S1	1982	17	0
T39N R16W, S2	1982	5	1
T39N R16W, S5	1987	2	0
T39N R16W, S8	1981	17	1
T39N R16W, S10	1981	5	1
T39N R16W, S11	1982	4	0
T39N R16W, S12	1982	5	1
T39N R16W, S15	1981	4	0

¹From Appendix 2 of Bureau 1991

Generally, moderate levels of sign were encountered during these surveys, indicating that at the time of the surveys tortoise densities may have been moderate. An increase in human activities that facilitate habitat disturbance and illegal collection of tortoises, such as rural and urban development, and recreation (Service 1994), has probably resulted in reduced population densities since the 1981-82 surveys. Although specific surveys along the existing transmission line in right-of-way A-20271 were not conducted, this area is of similar habitat and has been affected by human uses in a manner similar to adjacent areas. Thus, tortoises likely occur in low densities within this right-of-way.

EFFECTS OF THE PROPOSED ACTION

Disturbance of desert tortoise habitat would result primarily from placement of 15 new poles and creation of staging areas for stringing of wire both on the new poles and on the existing poles south of the Virgin River. Placement of the new poles would require cross-country travel off of existing roads to each pole site as well as disturbance of an approximately 15 by 15 foot area (225 square feet)(Bureau 1994) at each site. Total disturbance from pole placement is estimated at approximately 0.2 acre. Stringing of wires will require cross-country travel to wire-pulling sites along the transmission line route. Other work areas for storing equipment and parking vehicles will create additional disturbance. Total disturbance for all project activities is estimated to be less than 1.0 acre.

Habitat disturbance from construction activities would result in the crushing of shrubs and disturbance of surface soils. Desert tortoise cover sites could be destroyed and shrub cover, which provides sheltering and feeding sites, would be reduced. Vasek et al. (1975) examined recovery of Mohave desert scrub following transmission line construction. The effects of construction were still visible after 33 years, but natural revegetation had created a vegetation community similar to surrounding vegetation. Many shrubs crushed by construction activities would likely resprout from the base, facilitating natural restoration. None of the habitat anticipated to be disturbed by the proposed action is designated as critical habitat for the desert tortoise. No off-site adverse effects to habitat are anticipated.

Although desert tortoises were not recorded during surveys of the project area, they are known to occur in the area (Table 1). Densities are likely low, but desert tortoises could conceivably be encountered during project construction or maintenance, particularly if activities occur during the tortoise active season from March 15 to October 15 (Bureau 1995a), when tortoises may wander into work areas from adjacent habitat. Project activities could result in incidental injury or crushing of tortoises located in construction areas. Desert tortoises could also be collected by project personnel. Furthermore, refuse left by work crews could attract desert tortoise predators, such as the common raven (*Corvus corax*) and cause increased predation rates in nearby populations. The transmission line poles could also be used by common ravens as nest sites.

If construction occurs during the October 15 to March 15 period, an incidental take of a tortoise as a result of construction within the new right-of-way will be highly unlikely because no tortoises were found in the right-of-way during December, 1995, and tortoises are very unlikely to be active and wander into work areas from adjacent occupied habitat. However, the existing powerline was not surveyed and dormant tortoises may occur on site in burrows. An animal could be crushed or injured if vehicles or equipment accessing wire-pulling sites cause a collapse of an occupied burrow.

Construction of the proposed transmission line will support future growth and development in Scenic, Arizona, which will likely cause further adverse effects to the desert tortoise and its habitat. Although the transmission line supports this growth and development, it is not, in itself, causing this growth. The effects of continued growth in Scenic and elsewhere in the project area are considered in the "CUMULATIVE EFFECTS" section, below.

Effectiveness of Proposed Mitigation

The Bureau has proposed a number of actions that would act to limit or mitigate many of the adverse effects described above. Briefing personnel on the desert tortoise, presence of a monitor if activities are conducted during the tortoise active season, raking out vehicle tracks, committing to not creating any new permanent access, and other measures as described in Bureau (1995a and b) and summarized in the "Proposed Mitigation Measures" herein, should all contribute to reduced incidence of mortality or injury of desert tortoises and lessen habitat damage attributable to proposed construction and maintenance activities.

CUMULATIVE EFFECTS

Cumulative effects are those adverse effects of future non-Federal (State, local government, and private) actions that are reasonably certain to occur in the project area. Future Federal actions would be subject to the consultation requirements established in section 7 of the Act and, therefore, are not considered cumulative to the proposed project. Effects of past Federal and private actions are considered in the Environmental Baseline. Due to the extent of the lands in this area of the Mojave Desert administered by the Bureau, many of the actions that are reasonably expected to occur in the general area of the project (Beaver Dam Slope and Virgin Slope) would be subject to section 7 consultations. However, considerable acreage in the vicinity of Mesquite, Nevada and Scenic, Arizona are privately owned. Continued development of these non-Federal lands is anticipated. Additional development of private lands is ongoing in the vicinity of nearby Beaver Dam and Littlefield, Arizona. The Service anticipates that most of these private lands will be developed for various purposes in the foreseeable future and will be lost as desert tortoise habitat. None of these private lands are designated as critical habitat; however, human activities are likely to increase in public lands adjacent to developing areas that are designated as critical habitat. These activities may cause increased habitat degradation and lead to lower population densities of desert tortoises for the reasons discussed above in "STATUS OF THE SPECIES". Non-Federal actions that may result in a take of desert tortoises require a section 10(a)(1)(B) permit from the Service. Cumulative impacts of future State and private projects will be addressed through the section 10(a)(1)(B) permit process.

SUMMARY OF EFFECTS

The Service believes the effects described above are neither likely to jeopardize the continued existence of the desert tortoise nor result in adverse modification or destruction of desert tortoise critical habitat. We present this conclusion for the following reasons:

1. The proponent's project description includes features to minimize take of desert tortoises and mitigate the direct and indirect impacts of the proposed action on the tortoise.
2. Desert tortoise habitat that would be disturbed by the project is limited in size, poor in quality, and has not been identified as critical habitat or as important for recovery of the species. No critical habitat would be affected by the action.
3. Desert tortoises were not located on the northern portion of the project site (north of the Virgin River) during preconstruction surveys conducted in 1995 and the project proponent will attempt to complete construction before tortoises become active. Tortoise densities in the southern portion of the project (south of the Virgin River) are probably similarly low. Thus, the probability of a tortoise being taken as a result of this action is low.

CONCLUSION

After reviewing the current status of the Mojave population of the desert tortoise, the environmental baseline for the action area, the anticipated effects of transmission line construction and maintenance, and cumulative effects, it is the Service's biological opinion that construction and maintenance of the 12.47 kV transmission line near Scenic, Arizona, proposed by Dixie-Escalante REA are not likely to jeopardize the continued existence of the desert tortoise and are not likely to destroy or adversely modify desert tortoise critical habitat.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act prohibits the take of listed species without special exemption. Taking is defined as harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, collecting, or attempting to engage in any such conduct. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering (50 CFR 17.3). Harass is defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns that include, but are not limited to, breeding, feeding, or sheltering. Incidental take is any take of a listed animal species that results from, but is not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or the applicant. Under the terms of sections 7(b)(4) and 7(o)(2) of the Act, taking that is incidental to and not intended as part of the agency action is not considered to be prohibited under the Act provided that such taking is in compliance with this incidental take statement.

The measures described below are non-discretionary, and must be implemented by the agency so that they become binding conditions of any grant or permit issued to the applicant, as appropriate, in order for the exemption in section 7(o)(2) to apply. The Bureau has a continuing duty to regulate the activity covered by this incidental take statement. If the Bureau (1) fails to require any applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, and/or (2) fails to retain oversight to ensure compliance with these terms and conditions, the protective coverage of section 7(o)(2) may lapse.

AMOUNT OR EXTENT OF TAKE

This Service anticipates the following forms of take as a result of proposed transmission line construction and maintenance:

- 1) One desert tortoise in the form of direct mortality or injury resulting from project construction or maintenance.

- 2) Four desert tortoises through harassment associated with excavation of occupied burrows and movement of desert tortoises out of harm's way during construction activities.

This biological opinion does not authorize any form of take not incidental to construction and maintenance of the 12.47 kV Dixie-Escalante transmission line near Scenic, Arizona. If the incidental take authorized by this opinion is met, the Bureau shall immediately notify the Service in writing. If the incidental take authorized by this opinion is exceeded, the Bureau must immediately reinstate consultation with the Service to avoid a violation of section 9 of the Act. In the interim, the Bureau must cease the activity resulting in the take if it is determined that the impact of additional taking will cause an irreversible and adverse impact on the species, as required by 50 CFR 402.14(i). The Bureau should provide to this office an explanation of the cause of the taking.

EFFECT OF THE TAKE

In this biological opinion, the Service finds that this level of anticipated take is not likely to result in jeopardy to the species or destruction or adverse modification of critical habitat.

REASONABLE AND PRUDENT MEASURES

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize the incidental take authorized by this biological opinion:

1. Personnel education programs, defined construction areas, and well-defined operational procedures shall be implemented.
2. Activities that may result in a take of desert tortoise shall be closely monitored to ensure compliance with the terms and conditions of this biological opinion. To the extent practicable, project activities shall avoid desert tortoise habitat. Where adverse effects to an individual tortoise cannot be avoided, the animal shall be moved from harm's way.
3. Attraction of common ravens and other potential desert tortoise predators to the project area shall be reduced to the maximum extent possible.

TERMS AND CONDITIONS

In order to be exempt from the prohibitions of section 9 of the Act, the Bureau must comply with the following terms and conditions in regards to construction and maintenance of the 12.47 kV Dixie-Escalante transmission line. These terms and conditions implement the reasonable and prudent measures described above. Terms and conditions are nondiscretionary. Terms and conditions 1.a. through h., 2.b., and 3.a. are adapted from Bureau (1995a and b).

1. The following terms and conditions implement reasonable and prudent measure number one:

a. If a desert tortoise wanders onto the project site, all activity shall cease until the tortoise wanders out of harm's way on its own or until an authorized biologist (a biologist authorized by the Service - see term and condition 2.c.) can move it out of harm's way.

b. All work areas authorized for activity associated with the construction of the transmission line shall be staked or marked on the ground prior to construction. All construction workers shall strictly limit their activities and vehicles to areas that have been marked. Construction personnel shall be trained to recognize markers and understand the equipment movement restrictions involved. All work areas on public lands shall be contained within the confines of the rights-of-ways.

c. Construction-related traffic shall be restricted to routes approved by the Bureau. Acreage of all temporary roads and work areas used for placing the power poles or stringing the wire shall be estimated and a compensation figure of \$100 per acre shall be paid to the Bureau prior to issuance of the right-of-way.

d. At no time shall vehicle or equipment fluids be dumped on public lands. All accidental spills must be reported to the Bureau and be cleaned up immediately using the best available practices. All spills of federally or State-listed hazardous materials that exceed reportable quantities shall be promptly reported to the appropriate State agency and the Arizona Strip District of the Bureau.

e. No surface disturbance shall be authorized that would impact any threatened or endangered species prior to compliance with the Act.

f. Specific sites as identified by the Bureau, such as areas with listed species or fragile watersheds, where construction equipment and vehicles shall not be allowed, shall be clearly marked on site before any construction or surface disturbing activities begin. The Bureau and Dixie-Escalante REA shall be responsible for assuring that construction personnel are well trained to recognize these markers and understand the equipment movement restrictions involved.

g. No new permanent access routes shall be constructed. Temporary access to each new pole site shall avoid perennial shrubs, if possible, and shall be rehabilitated by raking out vehicle tracks upon completion of the project.

h. A qualified biologist (a biologist approved by the Bureau) shall be responsible for informing all employees working on this project about tortoises (including information provided by the Service and the Bureau on the life history of the tortoise, its status, protocols for dealing with tortoises if and when they are encountered, and the definition of take).

i. During any activities conducted between March 15 and October 15 that may result in a take of desert tortoise, the following shall be implemented. Prior to moving a vehicle, personnel shall inspect under the vehicle for tortoises. If a tortoise is found under the vehicle, it shall be allowed to move away from the vehicle on its own accord, if possible. Otherwise, an authorized biologist shall move the tortoise to a safe locality in accordance with term and condition 2.c. and 2.d.

j. The Bureau shall designate a field contact representative (FCR) who will be responsible for overseeing compliance with these terms and conditions and for coordination on compliance with the Service. The FCR, authorized biologist(s) (see term and condition 2.c.), and any qualified biologists approved by the Bureau shall have the authority and the responsibility to halt all project activities that are in violation of these terms and conditions. The FCR, and any authorized and qualified biologists shall have a copy of the terms and conditions of this biological opinion while on the work site.

k. Within 90 days after completion of construction, the Bureau shall submit a monitoring report to the Arizona Ecological Services Field Office. The report shall briefly document the effectiveness of the desert tortoise mitigation measures, actual acreage of desert tortoise habitat disturbed, the number of desert tortoises excavated from burrows, the number of desert tortoises moved from construction sites, and information on individual desert tortoise encounters as stipulated in term and condition 2.e. The report shall make recommendations for modifying or refining these terms and conditions to enhance desert tortoise protection and reduce needless hardship on the project proponent.

2. The following terms and conditions implement reasonable and prudent measure number 2.

a. If construction occurs from October 15 and March 15, the following terms and conditions shall be implemented:

1. In the new right-of-way, north of the Virgin River, a monitor shall be on-site at all times to ensure that these terms and conditions are implemented. This monitor need not be a biologist.

2. In the existing right-of-way, south of the Virgin River, one of the following terms and conditions shall be implemented:

a. A 100 percent preconstruction survey shall be conducted in the October 15 to March 15 period of all areas to be disturbed by construction and in all areas within 300 feet of areas to be disturbed. The surveys shall be conducted by a qualified biologist. If any desert tortoises or their burrows are located in areas to be disturbed by construction activities, the biologist shall work with the construction foreman to modify project boundaries to avoid adverse effects to the tortoise or its burrow. In making changes to project boundaries, the biologist and the foreman should consider that burrows may be up to 40 feet in length. If

disturbance of a desert tortoise burrow is unavoidable, it shall be examined for occupancy by tortoises. Occupied burrows shall be excavated by an authorized biologist and the tortoises relocated according to terms and conditions 2.c. and 2.d. If a tortoise is found above ground on a project site, activities that may result in a take shall cease until the tortoise moves out of harm's way, or is moved out of harm's way in accordance with terms and conditions 2.c. and 2.d. After modifications have been made to the project boundaries and any tortoises have been relocated, project construction may proceed if a monitor is on-site at all times to ensure compliance with these terms and conditions, as in term and condition 2.a.1.

b. A qualified biologist shall be on-site during all activities that may result in a take of desert tortoise. The biologist shall survey ahead of construction crews to locate any tortoises in areas to be disturbed. The biologist shall also ensure compliance by all personnel with these terms and conditions. If any desert tortoises or their burrows are located in areas to be disturbed, the biologist shall work with the construction foreman to modify project boundaries to avoid adverse effects to the tortoises and their burrows. In making changes to project boundaries, the biologist and the foreman should consider that burrows may be up to 40 feet in length. If disturbance of a desert tortoise burrow is unavoidable, it shall be examined for occupancy by tortoises. Occupied burrows that will be disturbed by project activities shall be excavated by an authorized biologist and the tortoises relocated according to terms and conditions 2.c. and 2.d. If a tortoise is found above ground on a project site, activities that may result in a take shall cease until the tortoise moves out of harm's way, or is moved out of harm's way in accordance with terms and conditions 2.c. and 2.d.

b. If construction occurs on any portion of the project between March 15 and October 15, a qualified biologist shall be on site during all activities that might result in a take of desert tortoise. The duties of the biologist shall be as described in term and condition 2.a.2.b.

c. Only biologists authorized by the Service shall handle desert tortoises. The Service authorizes Tim Duck and Dustin Haines to handle desert tortoises pursuant to these terms and conditions. If other personnel are to be authorized for handling desert tortoises, the Bureau shall submit the name(s) of the proposed authorized biologist(s) to the Service for review and approval at least 15 days prior to the onset of activities that could result in a take.

d. If a desert tortoise is found on the project site, and project activities cannot be modified so as to avoid disturbance to it, the tortoise shall be relocated by an authorized biologist into the closest suitable habitat within two miles of the collection site that will ensure the animal is reasonably safe from death, injury, or collection associated with the project or other activities. The authorized biologist shall be allowed some discretion to ensure that survival of each relocated tortoise is likely. Desert tortoises shall not be placed on lands outside the

administration of the Federal government without the written permission of the landowner. Handling procedures for tortoises shall adhere to protocols outlined in Desert Tortoise Council (1994).

e. The authorized biologist shall maintain a record of all desert tortoises encountered during project activities. This information shall include for each desert tortoise:

- The locations and dates of observation
- General condition and health, including injuries and state of healing and whether animals voided their bladders
- Location moved from and location moved to
- Diagnostic markings (i.e. identification numbers of marked lateral scutes)

No notching of scutes or replacement of fluids with a syringe is authorized.

3. The following term and condition implements reasonable and prudent measure number 3.

a. Construction sites shall be maintained in a sanitary condition at all times; waste materials at those sites shall be placed in covered receptacles to avoid attracting predators of desert tortoises and disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment.

DISPOSITION OF DEAD, INJURED, OR SICK DESERT TORTOISES

Upon locating a dead, injured, or sick desert tortoise, initial notification must be made to the Service's Law Enforcement Office, Federal Building, Room 8, 26 North McDonald, Mesa, Arizona, (Telephone: 602/261-6443) within three working days of its finding. Written notification must be made within five calendar days and include the date, time, and location of the animal, a photograph, and any other pertinent information. The notification shall be sent to the Law Enforcement Office with a copy to the Phoenix Office. Care must be taken in handling sick or injured animals to ensure effective treatment and care, and in handling dead specimens to preserve biological material in the best possible state. If possible, the remains of intact desert tortoises shall be placed with educational or research institutions holding appropriate State and Federal permits. If such institutions are not available, the information noted above shall be obtained and the carcass left in place.

Arrangements regarding proper disposition of potential museum specimens shall be made with the institution prior to implementation of the action. Injured animals should be transported to a qualified veterinarian by an authorized biologist. Should any treated desert tortoise survive, the Service should be contacted regarding the final disposition of the animal.

CONSERVATION RECOMMENDATIONS

Sections 2(c) and 7(a)(1) of the Act direct Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of listed species. Conservation recommendations are discretionary agency activities to minimize or avoid effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information on listed species. The recommendations provided here do not necessarily represent complete fulfillment of the agency's section 2(c) or 7(a)(1) responsibilities for the desert tortoise. In furtherance of the purposes of the Act, we recommend implementing the following actions:

1. The Bureau should promptly complete an amendment process to the Arizona Strip District Resource Management Plan to implement the Desert Tortoise (Mojave Population) Recovery Plan (Service 1994). This amendment should include programmatic-level policy for complying with the requirements of section 7 of the Act and for achieving recovery of the desert tortoise in regards to processing all forms of right-of-way applications.
2. The Bureau should maintain and make available to the Service a log of all projects that it has authorized that affect desert tortoise habitat. This log would allow quick assessment of total loss of habitat, desert tortoises taken, rehabilitation of affected habitat, and compliance with terms and conditions for all authorized projects. This information would be valuable to the Service and the Bureau in preparing the environmental baseline analyses in future endangered species documents.
3. The Bureau should monitor use of the transmission line poles by common ravens. If ravens nest on poles, the Bureau should determine if tortoises are among the prey items of the nesting pair(s). If tortoise carcasses are found associated with a nest, the Bureau should seek advice from Arizona Game and Fish Department about means to alleviate that predation, and take action as appropriate.

In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitat, the Service requests notification of the implementation of any conservation recommendations.

CLOSING STATEMENT

This concludes formal consultation on the Dixie-Escalante 12.47 kV transmission line. As provided in 50 CFR 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been maintained (or is authorized by law) and if: 1) the amount or extent of incidental take is exceeded; 2) new information reveals effects of the agency action that may adversely affect listed species or critical habitat in a manner or to an extent not considered in this opinion; 3) the agency action is subsequently

modified in a manner that causes an effect to a listed species or critical habitat that was not considered in this opinion; or 4) a new species is listed or critical habitat designated that may be affected by this action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation. Any questions or comments should be directed to Jim Rorabaugh or Ted Cordery of my staff.



Sam F. Spiller

cc: Regional Director, Fish and Wildlife Service, Albuquerque, NM (GM:GSV/LCR)
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Field Supervisor, Fish and Wildlife Service, Ventura, CA
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State Supervisor, Fish and Wildlife Service, Salt Lake City, UT
State Director, Bureau of Land Management, Phoenix, AZ

Director, Arizona Game and Fish Department, Phoenix, AZ

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